

EIA's Proposed Strategy for Addressing Declining Response Rates In the Residential Energy Consumption Survey (RECS):

Introduction

Over the 25-year history of EIA's Residential Energy Consumption Survey (RECS), response at various stages of this survey system has slowly but steadily decreased, from about 90 percent for the earliest surveys to the 70's for the last few cycles. This trend, which mirrors the experience of most government household surveys, including personal interview surveys, is especially troublesome for RECS. The RECS is actually a sequence of interconnected data collections: a survey of the household to get its energy-related characteristics, a request during the household survey to get the household respondent to sign a waiver form allowing the household's energy suppliers to submit billing information, and then a survey of the suppliers to collect the energy consumption and expenditures information. All of these collections are necessary to get a complete set of survey data; therefore, nonresponse at each stage has a cumulative negative effect on data quality. This presentation will describe an aggressive, multi-faceted strategy that EIA has planned to address the comprehensive nonresponse issue.

Approaches to Address Nonresponse

EIA is choosing to take a more intensive approach to respondent recruitment from the very beginning of the household contact process. We plan to send out introductory postcards to prospective sample households, announcing the upcoming RECS and letting them know that explanatory information will be coming soon. The introductory letters themselves are being reworked to make them more upbeat and encouraging to potential respondents rather than being bureaucratic renditions of the necessary information. Included in the letters will be the mention of gifts as a token of thanks for completing the survey.

In addition, the letter will emphasize EIA's capability and responsibility to protect the respondent's identifiable data due to the requirements imposed by the Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA), under which the 2005 RECS will be collected. Interviewers will also be trained to emphasize the protections afforded to respondents by CIPSEA and the lengths to which EIA goes to keep identifiable data secure and assure that it is not disclosed. It is unclear how much such assurances will help, because of public sensitivity to recent incidents where massive databases of personal information were accessed by hackers. However, our assurances, combined with the fact that the information we collect is not all that sensitive for the most part, will hopefully minimize respondent reluctance due to privacy concerns.

Once the interviewer makes contact with the sample household, (s)he will have a variety of incentives to help to encourage participation. Some of these will be non-monetary: the interviewer will have energy-saving brochures, and when it comes time for the respondent to sign the utility authorization form, the interviewer will provide the

respondent a pen that they can keep upon signing the form. The major incentive, however, will be an unconditional monetary incentive, offered at the time that the interviewer first makes contact with the prospective household respondent. In order to assess the effectiveness of the incentive, the monetary incentive program will be carried out as a carefully designed experiment. An expected 1/3 of sample households will not be offered an incentive; 1/3 will be offered \$5.00, and the other 1/3 will be offered \$10.00 (the interview is expected to take an average of 45 minutes). The division of households into the various incentive classes will be at the segment level, to avoid the jealous neighbor issue. The exact form of the monetary incentive has not yet been finalized, but it will be cash or a cash equivalent. Recent studies have shown that unconditional incentives, offered as a token of appreciation rather than as a payment for services, can help to elicit response, because the prospective respondent appreciates the thought and because the interviewer feels more confident about his/her prospects for success.

The 2005 RECS will be the first cycle conducted using a comprehensive new sample design for which field listing is now taking place. Using contemporary geographic information, areas of heavy concentration of Spanish-speaking households in the new sample have been identified. In many of these households, at least the prospective adult respondent may have limited or virtually no English skills. Bilingual interviewers will be recruited and used in these areas. EIA is also paying for a Spanish translation of the RECS questionnaire to be built into the Blaise system that is used as the driver of the interview and case management for the RECS computer-assisted interview. Hopefully these measures will minimize the issue of nonresponse due to language difficulty in these areas. Spanish as a household language occurs sufficiently frequently that it makes sense to pursue these initiatives; unfortunately, we cannot pursue them to address other language groups.

Of course, despite our best efforts a certain group of prospective respondents will refuse to participate. Field staff will be instructed to determine the primary reason for nonresponse. Response conversion letters sent to the prospective respondent prior to personal follow-up will be customized to address that primary reason, be it security/confidentiality concerns, lack of time, uncertainty about the purpose of the survey, or general refusal. Hopefully, our letters and follow-up efforts will convert a reasonable percentage of initial nonrespondents, but if household nonresponse shows itself to be an ongoing problem, EIA will have the option of subsampling "soft" nonresponse cases later in the field period. Nonresponse subsampling will allow the field staff to devote more effort to converting a reduced number of nonresponse cases. Sampling weights for these cases will be adjusted to reflect the subsampling process.

Noncollection of energy consumption and expenditures data is a separate problem. Reasons include refusals on the part of the household respondent or the energy supplier; inaccessibility of the energy supplier (especially a problem for fuel oil and propane dealers); difficulty in associating the account as provided by the household respondent with corresponding supplier records; and the difficult issue of master metering in apartment buildings. To address these issues, EIA has authorized our data collection

contractor to provide scanners for their interviewers. In advance contacts with the household, we will ask them to have available the latest bills from their energy suppliers. The information from these scanned images, when added to the household interview database, will hopefully eliminate problems with misunderstood and misreported supplier names and account numbers. Also, in the ever-increasing number of cases where energy suppliers show historical consumption information on the bill, we will have substantial information even if we are not able to get a response from an energy supplier.

Scanners cannot of themselves solve the problem of master metering. However, interviewers will have them available in a separate survey interview process where they contact the rental agents to get information about the building in which the sample household is located. The interviewer will ask the rental agent for a latest bill covering any master-metered account for the building, and will scan those bills. Later, statistical staff can use the information as an aid in prorating energy use specific to the sample household.

Conclusion, and Questions for the Committee

EIA takes very seriously the ever-increasing problem of nonresponse and is determined to do all that we can to try to counteract it. The procedures discussed above represent a concerted effort on our part to address this issue. We are open to any suggestions on this issue, and would like to hear Committee suggestions on how we could improve upon or expand them, or on additional procedures we could consider.